North Carolina Department of Public Instruction

1/31/2013

This Data Resource Guide is designed for administrators, teachers and support staff who are responsible for using school data to make decisions. District and charter school teams are encouraged to use this guide to design and implement trainings in order to establish Data Teams with the goal of increased data literacy and student achievement. School administrators and teachers can use this guide to establish and sustain a Data Team to guide and analyze the decision-making process informed by school data. Where possible, schools should use existing teams and structures to accomplish the tasks of the Data Team (e.g. schools that already have a School Improvement Team could use this exiting structure as a Data Team, as the goal for both structures is to improve instruction and learning within schools.) This guide may be adapted to accommodate local professional development requirements and customized implementation models.

Table of Contents

Introduction

Educators are facing increasing pressure from federal, state, and local accountability policies to improve student achievement. The use of data has become critical in how educators evaluate and monitor students' academic progress (Knapp 2006). As data demands have increased for districts, schools, and teachers, the pressure to analyze and use data in meaningful ways has also increased.

This *Data Resource Guide* is designed for administrators, teachers, and support staff who are responsible for using school data to make decisions. This guide contains general reference information in addition to role-specific administrator and teacher information.

This guide offers foundational information on:

- Types of Data

- Strategies for Evaluating and Understanding Achievement/Assessment Data

- Establishing/Maintaining Data Teams

Using the Data Resource Guide

Access to data can be challenging as data are often housed in disparate systems. Regardless of where data are housed, it is essential to understand how to use the data to improve instruction. District and charter school teams are encouraged to use this Guide to design and implement training for new or existing Data Teams or Professional Learning Communities (PLC) with the goal of increasing data literacy and student achievement. This guide may be adapted to
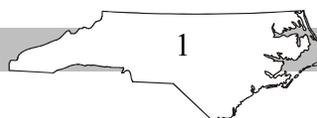
accommodate local professional development requirements and customized implementation models.

The Data Guide complements the "Introduction to Data Literacy" modules that can be found at https://center.ncsu.edu.   The modules provide learning experiences that develop and enhance abilities to find, evaluate, and use data to inform instruction.

Together with the data modules, this guide will help administrators and teachers build their capacity for implementing best practices. School administrators and teachers can use this guide to analyze the decision-making process as informed by school data.

Types of Data

Data are pieces of information organized for analysis or used to make decisions. For the purposes of this guide, data include information about students and teachers that have been gathered from observations, surveys, and other sources and that are available in grade books, spreadsheets, and other forms. Data can be placed into one of various categories: demographic, program, perception, achievement/assessment, or behavioral.

- Demographic data include gender, ethnicity, and socio-economic status.

- Program data include information about the quality of programs in the school. Collected data sets in this area can include performances, extracurricular offerings, specially-funded opportunities, before/afterschool tutoring participation, and measures of program fidelity.

- Perception Data reflect the opinions of the school community. Collected data sets in this area can include information from questionnaires, surveys, interviews and focus groups.
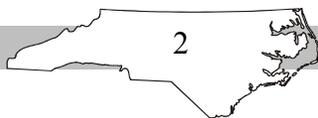
- ▪ Achievement/Assessment Data are results of student performance aligned to a set of content standards. Collected data sets in this area can include teacher observations, task performances, and test scores.

- ▪ Behavioral Data are results of student behavior that are aligned with behavioral expectations or standards. The data collected includes teacher observations.

Achievement/Assessment Data

Of the five types of data, achievement/assessment data often receive the most attention in education and thus will be a primary focus within this Guide. Demographic, program, perception, and behavioral data are often paired with achievement data in analysis in order to further understand what is taking place in a school or district. Different types of assessments are used to collect achievement data and each provides different information teachers can use to design, inform, and improve instruction and student learning.

Formative Assessment

Formative assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve intended instructional outcomes (McManus, 2008). Formative assessment is found at the classroom level and happens on a continuous basis. It provides information that is descriptive and obtained through means such as observation, open-ended questionnaires, interviews or artifact analysis. Data collected during formative assessment are sometimes qualitative in nature. Qualitative data are non-numeric in form and are common in situations where numbers are not adequate to describe complex opinions or behaviors.
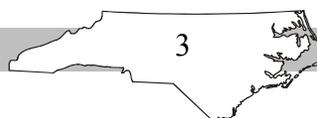
Data collected during formative assessment should be used to make daily decisions about what to do next in instruction as well as to monitor learning as it happens rather than waiting until quiz or test results are available to make these decisions. These data should not be used for summative high-stakes decisions about students (for grading or in accountability systems).

F*or more information about North Carolina's Formative Assessment Process, please visit* NC FALCON.

Interim/Benchmark Assessments:

Interim/Benchmark assessments are assessments administered at specific points (or benchmarks) in the curriculum to gauge a student's progress or performance at that particular point in time.

Interim/Benchmark assessments may be given at the classroom level to provide information for the teacher. Data collected from interim/benchmark assessments are most often quantitative in nature. Quantitative data are numerical in form and can be categorized, ordered, or measured in units.

Interim/benchmark data may serve a variety of purposes, including diagnosing gaps in a student's learning, evaluating a particular educational program or pedagogy, and gauging a student's likelihood of success on large-scale summative assessments.

<u>Summative Assessments</u>

Summative assessments are snapshots of student learning. They are given to evaluate student knowledge and capacity at the end of a unit, course, or school year.

Data from summative assessments have high-stakes implications for students, teachers, and administrators. Classroom summative assessment data are used for grading and student promotions/placement decisions. Statewide summative assessment data are often used in federal and state accountability systems.

For more information about North Carolina's Summative Assessment Program, please visit [*The Accountability Services Division*](#)*.*

Strategies for Using Assessment/Achievement Data

The process for evaluating data consists of several steps that assist teams with the collaborative inquiry process:

1. Conduct Needs Analysis

2. Gather and Visualize Data

3. Evaluate Data

4. Set Goals

5. Determine Strategies

6. Monitor Progress Toward Goals
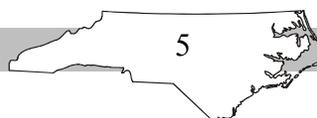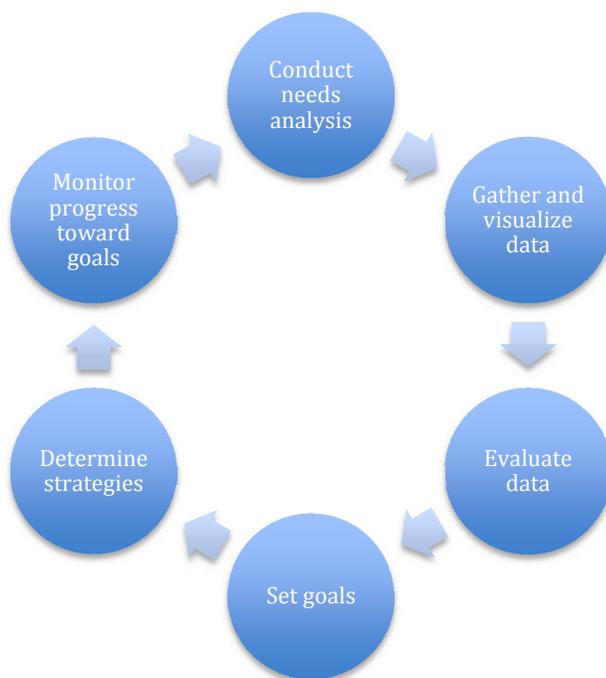
Step 1: Conduct Needs Analysis

Before collecting the data from any source, teachers or administrators must first identify needs and areas of focus. The primary goal of a needs analysis is to identify the gaps between students' current achievement relative to their proficiency expectations and students' ideal achievement potential. A survey of needs assessments performed by other schools and school systems has shown that essential components of a needs analysis (RMC Research 2008):

- Considers as wide a range of needs and issues as possible.

- Includes information gathered from varieties of different sources.

- Utilizes the most accurate and reliable data available.

- Involves individuals and stakeholders (students, families, educators, school leadership and administrative staff, community stakeholders, other child and family serving agencies

and organizations, etc.) in meaningful ways so as to gather a broad range of knowledge, skills and expertise.

- Results in the development of goals and plans to achieve those goals.

- Are used as the basis for resource allocation (budgets, time, etc.).

- Includes regular monitoring and evaluation of plans and strategies throughout the cycle.

Some guiding questions that should be asked before and during the needs analysis include:

- What do I want to understand about my students' performance?

- Why do I want to know this information about my students?

- What are my anticipated goals?

- What kinds of data do I need to analyze:

  o A student, a class, a program?

  o Today, this course, this year?

  o Formative, interim/benchmark, or summative assessments?

Step 2: Gather and Visualize Data

Once a needs analysis is complete, teachers and administrators can begin to collect, chart and track data. Before collecting the appropriate data, educators must be able to properly identify data categories or types and how to use them effectively.
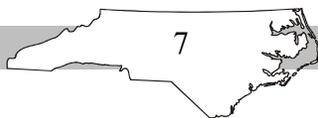
For example, an administrator who primarily deals with annual state assessments designed for accountability purposes might use summative assessment data to report to external stakeholders within of the school's community.

A teacher might use formative assessment to obtain immediate results (data) of student performance on standards-based skills in a content area or grade level. Teachers may also use periodic, or interim/benchmark, assessments at the beginning of the school year to determine entrance-level performance of the students. After the results are analyzed, teachers can make decisions for improving instruction. Educators may find it necessary to bring in other data types, such as demographic and program data, to see a more complete picture of student, teacher or program needs.

Guiding Questions for Gathering Data:

- Who are our students?

- What trends do we see in our student population?

- What factors outside the school may help us understand our students?

- How successful are the current programs in creating the academic excellence articulated in the standards?

- How will a program's success be measured?

- How often does the program deliver services to students?

- How do the members of our school community feel about our school and district?

- What evidence shows the knowledge, skills, and understanding our students have achieved?

- Which data indicate the degree to which our students show the conceptual understandings and generalizations in our standards?

- What evidence shows which students are meeting or exceeding our achievement expectations and which are not?

- What do we know about how each individual student learns?

Once educators gather various types of data, they can begin to graphically convey that data in meaningful ways. Graphing data visually depicts information, allowing the reader to make quicker meaning of the data. This is particularly true when looking at multiple data types. Following are administrative and classroom scenarios of data gathering and visualizing.

Scenario 1: Mrs. Smith, elementary school principal, is concerned about the science performance for grade 5 students. She has access to the science EOG assessment data for the past three years.

Grade 5 EOG Science Scores
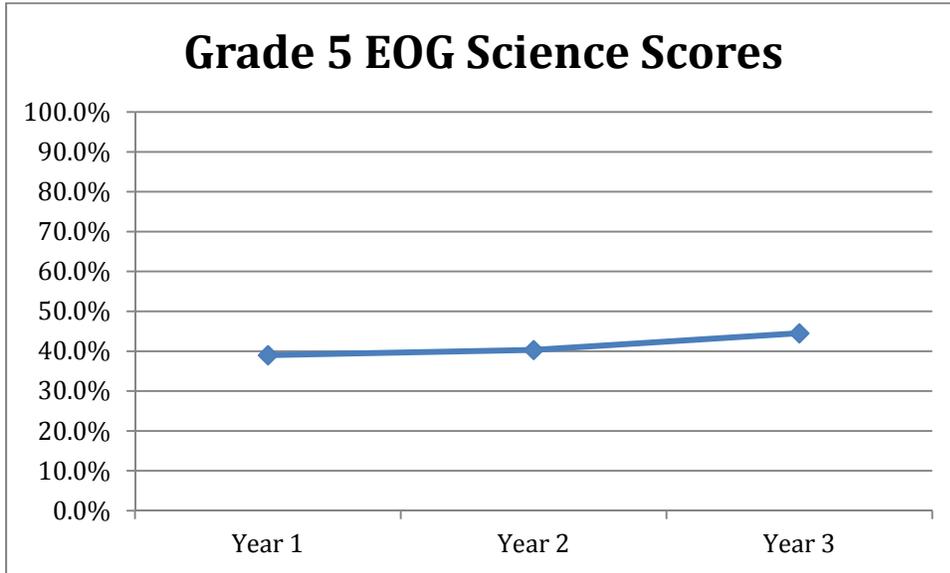
While it would be possible to disaggregate the data by looking at various subgroups, would that be the best approach? Because the school is consistently underperforming, Mrs. Smith's time would be better spent looking at program, demographic, or behavioral data rather than looking more closely at the achievement/assessment data. Because the majority of 5th graders are not performing well, changes are needed for all students.

For example, Mrs. Smith could look at behavioral data to determine if students have mastered the behavior skills needed to be successful. When behavior data is viewed as a measure of student success with regard to mastering the social skills needed to be successful in a school environment (many of which are similar to skills needed for success in higher education or the workplace, i.e. working with others, communicating respectfully and effectively) disciplinary data is used as formative and diagnostic information to design interventions leading to mastery of

pro-social behaviors. In this way, disciplinary data parallels academic data sources that guide intervention design and progress monitoring.

In addition, Mrs. Smith could look at the state accountability data on the website and locate other elementary schools with similar demographics that are performing well and determine what instructional or behavioral programs they are implementing and what it would take to implement them at her school.

Once achievement data improves above 60% indicating that the instructional or behavioral programs are working for the majority of students, data should be disaggregated to determine how different subgroups could be better served.

Scenario 2: Mr. Jones, middle school math department chair, wants to monitor the impact he and other seventh grade teachers at his school have on student performance. How should this be done? Mr. Jones decides get a snapshot of the seventh grade students at the beginning of the school year. He pulls the following data from the Education Value Added Assessment System (EVAAS) to get a summary of the seventh-grade students' probability of achieving proficiency.

Report: **School Academic Preparedness Report** **Grade:** **7th Grade**
School: **School-Frf** **Projection:** **7th EOG Math (Level III)**
District: **District-PW**
Year: **2012**

Select Subgroups

Enrolled 7th Grade Projected to 7th EOG Math (Level III)		
Probability of Proficiency	Nr of Students	Percentage
Greater than or equal to 70%	123	45%
Between 40% and 70%	57	21%
Less than or equal to 40%	62	23%
Students who lack sufficient data	30	11%

(green)	Students whose probability of proficiency is greater than or equal to 70%
(yellow)	Students whose probability of proficiency is between 40% and 70%
(red)	Students whose probability of proficiency is less than or equal to 40%
(white)	Students who do not have a projection due to a lack of sufficient data.

As depicted in the graph, forty-five percent of the students have a greater than seventy percent probability of proficiency in math at the end of the school year. He can further identify the students from this information to share with her seventh grade PLC so that students can be provided extra supports from the beginning. He also plans to do a similar graph at the end of

each district benchmark to monitor progress and at the end of the year to compare the probabilities with actual performance.

Scenario 3: During a lesson, Ms. Martin decides to collect evidence (formative assessment data) of how well her students are learning the concepts she is teaching. Her goal is to use the information to help students monitor their own progress, to help them improve their learning, and to help her plan next instructional steps.

Mrs. Martin displays some pre-planned questions on the interactive white board and has her students respond to each using electronic response devices. The data is captured as each response is entered and number correct by student is shown. By sorting this data from the least number of questions correctly answered to the most number of questions correctly answered, Ms. Martin can readily see which students are having the most difficulty. She can also color-code the data (e.g., red, yellow, green) to determine which students may be learning as expected (green) and which ones may need the most assistance (red) with learning the concepts.

To make the data more meaningful, the teacher will need to talk to the students to determine what misconceptions or misunderstandings they are having. The number correct will not be enough to improve learning or make instructional adjustments.

Unsorted Data

Student:	Number Correct
584473	4
704204	3
436482	5
173972	8
633710	6
154710	6
778510	5
161115	6
718434	6
273906	3
516853	9
802453	5
635027	8
175990	6
306489	3
81531	8
422067	7
947054	2
780856	5
977067	6
489189	6
979050	8
127693	9
364986	5
829336	7

Sorted and Color-Coded Data

| Student:	Number Correct	
947054	2	🟥
273906	3	🟥
306489	3	🟥
704204	3	🟥
584473	4	🟨
778510	5	🟨
802453	5	🟨
780856	5	🟨
364986	5	🟨
436482	5	🟨
633710	6	🟨
718434	6	🟨
810766	6	🟨
977067	6	🟨
489189	6	🟨
154710	6	🟨
161115	6	🟨
17599	6	🟨
422067	7	🟩
829336	7	🟩
173972	8	🟩
635027	8	🟩
81531	8	🟩
979050	8	🟩
516853	9	🟩

Step 3: Evaluate Data

After gathering and visualizing data, administrators and teachers must learn to evaluate the data. As an example, if Ms. Martin in scenario 3 determined that many students were struggling on a particular type of question then she could further refine her lesson plan to address that gap.

Though teachers always examine student work as part of the grading process, the new focus on balanced assessment calls for a more structured and collaborative evaluation of student work throughout the learning process. Evaluating student data focuses on several critical areas: diagnosing student strengths and needs of improvement; identifying next instructional steps based on the diagnosis; and identifying characteristics of proficiency for an objective by using a specific assignment/assessment.

To illustrate, a teacher or a data team could examine three student papers to determine if the response is proficient and to identify what student knowledge and gaps exist. The teacher or a data team could identify next instructional steps including which questions the teacher might want to ask the student in order to better understand his/her thinking, what feedback the teacher might give and what re-teaching might need to take place for the whole or part of the class. And finally, a team of teachers could collectively agree on what the team believes constitutes a proficient response on a selected text or question.

Teachers or data teams can track the data they have collected for evaluation using data walls or electronic dashboards. Data walls/dashboards not only offer a visual representation of information but can help an educator to better understand and evaluate the large amounts of diverse data. Data walls/dashboards are powerful and accessible displays of student progress that

foster continuous collaboration throughout the year and allow for more complete evaluation. Data walls/dashboards are most effective when they include the following:

- Student achievement results. These data walls should show growth over time.

- Strategies of adults. It is important that narratives describe the strategies used by a teacher to impact student achievement.

Teachers should be careful not to display any confidential information on data walls and be mindful of security procedures when electronic dashboards are available.

When analyzing data, certain trends or patterns may begin to emerge. Once conclusions have been drawn and trends or patterns identified, it is important to form a hypothesis about what the underlying cause(s) might be to help structure and guide goal setting and the selection of appropriate strategies with the highest likelihood of being effective.

It may be tempting to jump to certain conclusions based upon these patterns or trends but it is critical to remember that not all relationships are causal. Just because there is an apparent correlation between two factors does not necessarily prove that it is the result of a causal relationship. For example, there is evidence that suggests that students who go out to dinner weekly tend to have higher grade point averages (GPAs) than those who do not. This most likely does **not** mean that going out to eat improves GPA, but perhaps hints at the fact that wealthier students may be able to afford eating out and that they may have higher GPAs as a result of having access to more resources and experiences outside of the school environment.

Because it can be difficult to establish causal relationships, especially in education, finding strong correlations between instructional methods and learning outcomes is often the best an educator can achieve.

Guiding Questions for Evaluating Data:

- Based on all of the data studied and the patterns observed, what is the sum of problems that have emerged from the data?

- Given the problems identified using the data, what might be the underlying cause(s) or correlations?

- Which Common Core or NC Essential Standard(s) is (are) the teacher assessing?

- What percentage of students demonstrated proficiency?

- Which students have not demonstrated proficiency?

- What diagnostic information did an examination of student work provide?

- When we compare performance by subgroups (e.g., by racial group, gender, students with disabilities, English as a Second Language (ESL) students, or students in free and reduced meals program), do we see any group not performing as well as the entire group? If so, what steps can be taken to address the issue?

- Do we have students who are not attaining proficiency across indicators?

- What instructional strategies selected by teachers produced the intended outcomes?

Step 4: Set Goals

Once the data has been evaluated, the teacher or administrator can set improvement goals that are SMART: **s**pecific, **m**easurable, **a**chievable, **r**esearch-based, and **t**ime-based. Using the SMART goal framework, educators can ensure that the goals they set are appropriate for addressing identified needs. SMART goals are:

- **S**pecific – Goals should be focused and clearly stated.

- **M**easurable – Goals should be measurable. They should articulate the desired outcome, not the specific strategies.

- **A**chievable –The goal should be one that can be achieved. Avoid unrealistic goals and aim for tangible goals that cause stretching but are attainable.

- **R**esearch-based – The goals should be directly based on the observed patterns seen through the data and their connection to the evaluation criteria.

- **T**ime-based – The goals should have realistic target dates. A target date set too far in the future is too easily put off and conversely a target date set too close is unrealistic and discouraging.

These goals are growth targets and should clearly state the expected percentage of students who will be proficient and higher in the measured standards at the end of the designated instructional time.

For example, a teacher at Lincoln Elementary knows from her data that her female students are not as proficient as the male students in her class. She has set an end goal that 70% of her female

students will increase their proficiency on their math EOG by 5% by the end of the year. The teacher, looking at the more immediate needs of her students, also sets a SMART goal of those female students being 80% proficient on math standards 1-3 by the midterm.

Guiding Questions for Setting Goals:

- What did the visualization and evaluation of data reveal?

- What trends or patterns did analysis of the data reveal that needs to be specifically addressed?

- Are all of the data sources accessible to me? Can progress be measured?

- Is the desired outcome realistic in the time that the teacher or administrator has with the student, educator, or program?

Step 5: Determine Strategies

A teacher, administrator, or data team may consider implementing strategies in small or large groups based on differentiated performance or in whole-class instruction. To best meet the goals established, determining strategies may include discussions on how instruction will be differentiated for students in various performance levels, such as "above proficient", "proficient", "close to proficient", "further from proficient but likely to be proficient after instruction" and "in need of intensive support."

For example, an administrator may want to ensure that 80% of his or her teachers are performing at the proficient level in standards 2-3 (respectful environment for diverse learners and know the

content they teach) on the evaluation instrument by the summative evaluation. In order to achieve this goal, the administrator may decide to implement in-service days that focus on diverse learners and to pair new teachers with accomplished veteran teachers to share best practices and resources.

Guiding Questions for Selecting Instructional Strategies:

- What strategies are individual teachers implementing with a high degree of success?

- Should these practices be duplicated?

- Is this strategy:

    o Clear and understandable to all readers and users?

    o Dependent on other activities? (If so, be sure to describe the sequence of actions)

    o Based upon best practices?

    o Observable and measurable?

    o An action that will make a positive difference?

    o One specific action or activity?

    o An activity that will definitively lead to accomplishing the goal?

    o Assignable to specific persons?

    o Doable – one that can be implemented?

    o Require additional support (training/coaching) for staff to implement effectively?

- Which technologies can enable accomplishment of goals?

Step 6: Monitor Progress toward Goals

Results indicators complete the statement: "When this strategy is implemented, we expect to see the following evidence of its effectiveness, which is …" Results indicators serve as a monitoring tool for educators and detail both what educators do and how students perform.

Educators should determine what results they expect from the implementation of their strategies. They determine how to measure the fidelity of strategy implementation and when and how to administer summative assessments/evaluations. Once the data from the fidelity measure and assessments/evaluations are analyzed, educators should monitor the effectiveness of the intervention and determine and track progress toward the goal. If the teacher, administrator or data team decides to move to a new focus area and a new goal because an earlier goal was achieved, they must decide what the next pre-assessment will be and when it will be administered, and thus the cycle continues. If the current goal has not been achieved, the teachers analyze their use of the agreed-upon instructional strategies. This analysis should lead to the refinement of the current strategies or the replacement of those strategies with new ones that the team predicts will be more effective.

Guiding Questions for Defining Evaluation Strategies:

- How will we know if our strategies are successful?

- How will we measure whether strategies were implemented with fidelity (as planned)?

- What evidence will we have to show the success of our actions?

- Do demographic data have an influence?

- Do student behavioral data have an influence?

- How are trends important in answering the question?

- What factors outside the school may help us understand our students?

The examples of strategies offered in the "Strategies for Using Assessment/Achievement Data" section of the Guide are by no means exhaustive but are aimed at giving a sense of how to utilize data to guide instruction. Going through the process of collecting and charting data, analyzing it, setting goals, determining effective strategies for instruction, and then monitoring and evaluating results (and repeating this process) will promote improvement in education at the classroom, school and district levels.

Establishing/Maintaining a Data Team

Data Teams consist of administrators, teachers and support staff who implement data-driven decisions at the district, school, and classroom levels. Data Teams provide structure and guidance for teachers to identify areas of student need and collaboratively decide on the best instructional approach to address those needs. The team structure allows members to break down the barriers of individual practice and create professional teams of educators who continuously reflect on and improve their practice.

Where possible, schools should use existing teams and structures to accomplish the tasks of the Data Team. Data Teams do not necessarily need to be brand-new teams, and they could be composed of people from pre-existing teams, such as School Improvement Teams.

Types of Data Teams

District Data Teams

District Data Teams focus their efforts on developing district-level systems to support implementation of strategies, systems development, and data-based decision-making in schools. Examples are strategies related to curriculum development, hiring and retention, and school performance standards. This guide focuses on school and instructional Data Teams with references to district Data Teams where appropriate.

School Data Teams

School Data Teams focus their efforts on developing school-wide strategies to increase student achievement. Examples are strategies related to school scheduling, teacher assignment, or program organization and support. The strategies may be developed after a school has conducted a thorough analysis of its performance with respect to the student outcome indicators provided by the district. This should also include an analysis of the fidelity of implementation for current practices and strategies. In this analysis, it is important to consider the amount of time it may take for the implementation of any new strategy to show impact in outcome indicators.

Based on the analysis, the school Data Team decides which areas of student achievement are the highest priorities and then focuses a plan of action on those priorities. Based on a shared vision and common mission, the school Data Team coordinates the work of the instructional Data Teams.

School Data Team members may include principals, administrators, teachers and support specialists. Parents and students are also optional, though recommended, school Data Team members.

Instructional Data Team

The Instructional Data Team is responsible for data analysis and instructional/curricular decision-making for a particular grade level or content area across grade levels. Members of this team may include educators, school leaders, specialists and behavioral/mental health personnel. Common formative assessment data and samples of student work are analyzed to identify strengths and weaknesses in student learning and to determine what actions and instructional strategies will best address students' learning objectives.

Data Team Organization

A Data Team can be a grade-level, departmental or specialist team that collaborates around the analysis of student work with a common focus on the effectiveness of teaching and learning. A school may want to convene a grade-level Data Team made up of several or all of the teachers in a specific grade when analyzing common assessment data or when conducting inquiry that is specific to that grade level. Building leaders may consider having the school data team also serve as an instructional data team since layering teams in a school can create a disconnect and result in the duplication of work. Schools may use a departmental Data Team when analyzing data across a specific subject to identify gaps in instruction and learning. A school may also want a specialist data team crossing multiple disciplines. One example of this type of team would be various teachers of Art, Music and ESL subjects grouping together to share student data across the team.

What are the Roles of Data Team Members?

A Data Team assists administrators in meeting their educational goals. Data Team members will provide resources, support, and encouragement. The team will also disaggregate data, analyze, report, monitor, and facilitate staff collaboration in data use. Other roles and responsibilities that Data Team members may have include but are not limited to the following:

- Establishing and maintaining data walls;

- Setting data meeting agendas;

- Reviewing, analyzing, and preparing data for team discussions; and,

- Facilitating meetings around data.

Each member of the team should be responsible for performing distinct roles within the team including team leader, data analyst, minute taker, and timekeeper. The following stakeholders may play various roles:

Principals: Principals monitor the work of the School Data Teams, conduct brief but regular meetings with the team, and offer resources, support, and assistance where needed. The principal's presence and support is as important long-term as it is during the formation of the Data Team. The principal can support the work of Data Teams by providing the time, resources and the authority for the Data Teams to do their work. If the principal is a member of the Data Team, it will be easier for the principal to understand what is being asked of the Data Team, what kinds of analytic tasks are being conducted by the Data Team and what recommendations are being made to the teachers.

Team Leaders: For teams to function efficiently and effectively, someone on the team must assume a leadership role. Team leaders may be selected by team members or appointed by the principal. In some instances, the Data Team Leader may even be the principal. The team leader's responsibilities include facilitating Data Team meetings, updating stakeholders, and encouraging active listening and participation.

Data Analyst: The Data Analyst presents an overview of findings from a review of current data and initiates discussion of the status and effectiveness of currently implemented practices and strategies. This person has access to the necessary data and performs a cursory analysis of data to present to identify the problem identified during the needs analysis that will inform and guide the team's discussion. The person serving in this role should be comfortable with mining data live during the meeting and capable of creating custom reports and graphs as the team digs deeper into the data.

Minute Taker: Every time a Data Team meets, it is important to capture the discussion and decisions made by the team in a concise and accurate manner. The Minute Taker should be a full participant in the discussion and should be comfortable asking for clarification on, reviewing, evaluating and revising items with the team. This person is also responsible for sending the finalized meeting minutes to team members and other appropriate school and district staff.

Teachers and other Team Members: During Data Team meetings, the other team members must provide information and insight, participate in group discussion and decision-making and commit to strategies determined by the Data Team as a whole.

Who should be on the Data Team?

When establishing/maintaining a Data Team it will be important to consider what criteria will be used to select/retain its members. It will be important to ensure that the members have the knowledge and expertise to contribute to the success of the team. The Data Team should be made up of leaders willing to meet regularly to collaborate and focus on improving student achievement by helping staff members understand how to use student data to guide decision-making.

Individuals who already have an understanding of how data can be used to inform and guide instruction are ideal candidates for team membership. Where possible, schools should use existing teams and structures to accomplish the tasks of the Data Team. Data Teams do not necessarily need to be brand-new teams, and they could be composed of people from pre-existing teams, such as School Improvement Teams and other bodies. Members of Data Teams must be willing to accept results that may not always be favorable. The ideal candidates for a Data Team should be:

- Effective Problem Solvers

- Inquisitive Researchers

- Data Literate

- Creative/ Innovative Thinkers

- Strong Team Contributors

- Capable Technology Users

- Effective Communicators

- Effective Leaders

- Self-motivated/Independent Learners

- Diverse Thinkers

- Team Players

Guiding Questions to Ask As You Form/Maintain Your Data Team:

- What will the Data Team at my school look like? Why?

- How will I identify members of my Data Team? Why?

- What ongoing professional development and support might the Data Team members need and how will that be provided? (e.g. district level data coach)

- What other attributes will a successful Data Team member possess?

Developing a Vision Statement

An effective vision for a data team articulates a vivid picture of the organization's future that motivates members to work together to make the shared vision a reality.

District Data Teams

Both the district and individual schools play major roles in developing vision statements. The district may initiate the discussion by bringing together representatives from each school. This shared vision should provide an umbrella statement that gives direction to all schools, though each individual school will need to develop its own vision as well.

School Data Teams

As a school's vision statement is developed, it is important that administrators, teachers, community members and students provide input in developing a shared vision. A vision that is shared, accepted, and connects with the personal visions of those within the school will have the greatest impact. The team may write the school vision statement describing how the school will use data to support school-wide goals and defining key concepts critical to teaching and learning (e.g., achievement, data, evidence, collaboration). However, a Data Team does not hold staff accountable for implementing the vision. Rather, they can provide leadership through modeling the use of data.

Instructional Data Teams

Administrators and principals need to help align the instructional team vision with a school-wide vision for using data to guide instructional decision-making and to convey that vision to others. A strong culture of data use is critical to ensuring routine, consistent, and effective data-based decision-making. The vision should articulate how the school will use data to develop and support school-level student achievement goals. The vision needs to be actionable and include critical elements such as specific data-use activities, staff roles and responsibilities, and timelines. The data vision could be a component incorporated into the school's strategic plan for student achievement or any other existing plans for various funding sources such as federal funding or grants for districts.

Guiding Questions for Developing a Vision Statement:

- How do we want to define what students and teachers should know?

- How do we measure what students and teachers should know?

- How do we use data in answering those questions?

Data Team Meetings

A Data Team needs specifically scheduled times for meeting and planning. It is an important role of the principal to ensure common planning times or specific time built into the day for the Data Team to meet on a regular basis.

The frequency of meetings often depends on the type of Data Team. District Data Teams tend to meet on average once a month. School Data Teams may meet once a month or every two weeks. Instructional Data Teams normally meet more frequently, sometimes meeting weekly.

Data Team meetings may vary in length from 45 minutes to an hour and a half. It is the job of the team leader or facilitator to insure that meetings begin on time and do not run past the scheduled time. Assigning a team member to act as timekeeper and prompt the team when the allotted time for a specific topic is running short will help the team manage their time effectively.

It is recommended that all minutes from the Instructional Data Teams be submitted to the School Data Team for review and monitoring. Additionally, it is recommended that all minutes from the School Data Team should be submitted to the District Data Team for review and monitoring.

Conclusion

The first steps towards becoming a data literate educator must include understanding the varying types of data and what kinds of information these pieces of data can provide. A data literate educator knows how to identify which data provide the best sets of information in order to answer specific questions, how to analyze that data, how to best present and chart this information in useful ways, and how to utilize this data to guide instruction. This Guide is aimed

at helping educators establish the foundation for data literacy and good data-use practices with a focus on achievement/assessment data.

While more teachers and administrators are using data as a tool for improvement, team efforts will ensure broader success in classrooms and schools across the state. Forming data teams from pre-existing bodies such as Student Achievement Teams is an important part of the process as this allows for communication and support among teachers and administrators. Data teams provide a structured approach for maximizing data-driven results in an environment in which all educators (teachers, principals, LEA staff) can work together in order to increase student and school achievement.

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